ANCIENT EGYPTIAN SOCIETY HAS MAINLY BEEN INVESTIGATED THROUGH THE LENS OF its rich and well-preserved mortuary culture, which has been taken as a representa-
tive reflection of the nature and organization of this early complex society.¹ The
emergence of social complexity has also been evaluated through the analysis of mortuary remains
and practices, especially the study of cemeteries and the evolution of burial customs. The rich
archaeological as well as textual data from ancient Egypt has made such a research approach
feasible and logical. Attempting to investigate Egyptian society from a different angle, through its
system of settlements, is a much more challenging project but offers the advantage of providing a
first reliable basis that can then also be used for cross-cultural comparisons. This current study
constitutes a major step toward a better understanding of urban society in ancient Egypt based on
the growing amounts of data available from ancient settlements through archaeological field-
work over the past two to three decades. The aim is not to develop new urban theory but to
provide a solid and consistent foundation for comparative studies on ancient urbanism and early
complex societies.

One of the important questions that will be addressed
in this study is whether ancient Egyptian society can and
should be considered an “urban society.” The opinions
on this matter are divided and demonstrate the existing
challenges of dealing with the complex evidence and
incomplete data. It is the aim to advance questions
about the characteristics and the evolution of the ancient
Egyptian settlement system over a considerable stretch of
time encompassing periods of centralized and fragmented
political control, which will help to enhance our understand-
ing of ancient Egyptian society on a much wider scale and promote a perspective that it is not exclusively
based on its mortuary culture.

Closely related to these issues concerning the character
of the settlement system in ancient Egypt is the role of the
state, which has been interpreted in older publications as
an all-encompassing and deeply influential factor of
Egyptian society. Newer research has indicated that the
role of local administration and settlement networks
should not be understated.² For example, Christopher
Eyre and Mark Lehner have argued that the ancient
Egyptians were for most parts of Egyptian history essen-
tially a village society in which the centralized state made
use of an already existing settlement system without gen-
erating and imposing order in the way of a new urban
form of settlement but rather taking advantage of a pre-
existing and self-regulating network of towns and
villages.³

The current study has the aim of shedding light on the
inherent urban character of ancient Egyptian society,
which can be traced back to the Predynastic Period
when towns showing urban features started to appear
along the margins of the floodplain and in the Nile
Delta (Chapter 4). Although size and population density
are not necessarily the decisive criteria for de-
fining the urban character of Egyptian settlements (see discussion in
Chapter 1), the role and function of many towns as well as
the complex network and hierarchies within the settle-
ment system in Egypt cannot be ignored. The notion that
the state and the emergence of urbanism might not be
directly dependent on one another arises because early
urban centers (e.g., Hierakonpolis in the south of Egypt)
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seem to have existed before the unified territorial state took control of the entire country. It appears that the central government realized the potential of integrating the existing settlement system into the wider administrative system through establishing a number of official institutions. The Old Kingdom period shows various attempts by the central authorities to achieve a better economic but also ideological integration of the large territory that was governed by the king and its court residing in the Memphite area. An interesting glimpse of the evolving urban society less overshadowed by the control by the state can be found during the First Intermediate Period, which shows evidence for flourishing provincial capitals managed by local elites. The fact that the settlement system did not decline during this time (see Chapter 7) can be taken as strong evidence for a relatively stable urban society whose administrative practices and economic basis on a regional level were successfully maintained by a local elite.

Lehner takes this approach further and proposes to investigate the Egyptian civilization within the theoretical framework of a complex adaptive system (CAS) and the patrimonial household model. The former concept is based on the broad principal that a variety of systems taken from the biological and social sciences indicate that local interactions can lead to the emergence of complex global patterns. Although it is often impossible to isolate and fully comprehend each local interaction and its precise consequences that generate a particular complex system, it is useful to focus on the system as a whole – including global patterns that might become discernable – but also to investigate multiple levels that do not necessarily follow a specific hierarchy.

As Lehner recognizes, Egypt makes an excellent case study for a complex adaptive system in view of it being a typical example of an early-centralized nation-state that was based on a large network of towns and cities spread along the Nile Valley and the Delta region. In order to better define social complexity in Egypt, it is certainly useful to move beyond the traditional approach of investigating the different facets of ancient Egyptian society through the lens of central state control. When analyzing the large amount of archaeological and textual evidence, it is evident that such control was much more dispersed and that there were many levels within the social fabric that need to be taken into account and adequately addressed. Analyzing the archaeological evidence from towns and cities that shed new light on their layouts and overall organization down to the smallest units – i.e., the domestic houses and their inhabitants – has the possibility of providing a much more comprehensive picture of urban society and its inherent hierarchies than has been achieved in the past. Previous studies have had the tendency to focus too exclusively on the role of the central government and the highest elite, investigating socioeconomic aspects of Egyptian society from the angle of state control and the redistributive system. The CAS approach, on the other hand, has the advantage of including aspects on possible modes of decision-making processes used by the inhabitants on a local but also national level.

The patrimonial household model, on the other hand, propagates a “bottom-up” approach to the investigation of the ancient Egyptian state as “extended households-of-households.” While this model seems an attractive approach for analyzing ancient Egyptian society, there is evidence that it evolved beyond the limits of the household unit. Already by the second half of the third millennium BCE, there is evidence for the existence of towns with some elements of the population seeking employment beyond their close kinship ties. Key evidence for the emergence of an “urban proletariat” comes from the first settlements that were founded by the state and whose inhabitants constitute a variety of social groups in the service of official institutions that had been set up by the state in order to administer its growing economic needs in relation to establishing and maintaining royal mortuary complexes. As will be outlined in Chapter 5, the first evidence for the central government taking advantage of the existing settlement system and beginning to manipulate it to its own advantage dates back to the Old Kingdom.

The goal of this study is to trace the development of Egyptian urbanism over a critical period of time, from the beginnings of complex society and the formation of the centralized state at the end of the fourth millennium BCE to the end of the Middle Kingdom, including the transition into the early Second Intermediate Period (ca. 1650 BCE). This 1,800-year time frame allows us to examine the origins of urban society and to compare periods of strong centralized state organization, such as the Old and Middle Kingdoms with the First Intermediate Period, a time of political fragmentation (Table 5.1). In addition, it provides an excellent opportunity to investigate long-term cycles and fundamental characteristics that define urbanism in ancient Egypt and allows for an understanding of the degree to which settlement development was affected by political, administrative, and socioeconomic changes.
The Predynastic and Early Dynastic material will provide valuable insights into the beginnings of the urban evolution and will allow us to trace the appearance of key elements such as temples, town enclosures, buildings of official character, and palatial complexes in settlement sites in the Nile Valley and the Delta. Within the current framework, it is important to consider the urban environment in Egypt as an evolving system encompassing both planned and “organic” cities interacting with rural estates and village communities, all within the overarching aegis of a centralized state apparatus during periods marked by powerful kings and a stable administrative and economic system such as can be recognized for the Old and Middle Kingdom periods. Nevertheless, the degree of influence on and involvement of the state in the existing settlement system can best be evaluated at times when the royal power was weakened, such as during the First and Second Intermediate Periods, which offer further insights on the development of towns and cities during periods of political fragmentation.

One especially important aspect of Egyptian urbanism from the Old Kingdom onward is the role of state-planned and state-founded settlements. The evidence shows that the central government was quite invested in establishing an efficient network of settlements that would support the economic and administrative goals of the country. There seems to have been different strategies employed—and one could say “experimented” with—by the central government; certain measures clearly evolve gradually over time until the New Kingdom, when temples can be considered the most powerful economic institutions in the country. For example, there is good evidence that the central government started out with a system of high administrators that were sent to different towns in the country in order to take control of the administration of entire provinces—so-called nomarchs—during the third millennium BCE, which was replaced by the time of the Middle Kingdom with a system of local majors and governors residing in the provincial capitals who were often members of local elite families.13

State-founded settlements can in many cases be recognized by their strictly orthogonal organization and repetitive pattern in house plans, but they also give an opportunity to see how the higher level of administration envisioned a settlement and its layout. These much more artificially conceptualized settlements provide a unique chance to understand how an inherently urban society conceived and made abstractions regarding town planning.14 Such sites not only shed light on what the ancient Egyptians saw as necessary elements of a town but also provided a self-reflection of their own society, following to some extent an idealized vision. Practical concerns also influenced overall planning, such as using space along the interior of town walls for larger storage installations or accessing major silos, which held a settlement’s grain reserve. It is important to consider why the state founded a settlement and to learn how this primary purpose might have evolved into something else by the end of its occupation under the influence of its inhabitants. The comparison between state-founded settlements and organically evolving sites is an interesting one and allows for a much better understanding of the nature of urbanism and urban society in ancient Egypt as a whole. Although this comparison offers an exciting angle for current research, other questions concerning settlement size and population density are more difficult, if not impossible, to answer based on the available evidence. Therefore, it is important to recognize the limitations and at the same time emphasize the potential of the archaeological data from these sites. As will be seen in the chapters analyzing selected examples, this research, based as much as possible on the latest results from recent archaeological fieldwork, will provide fresh insights into the characteristics of urbanism in ancient Egypt during the subject time period.

Furthermore, it is important to point out that the archaeological evidence for settlement sites that fall within the selected time frame of this study is quite unbalanced. Archaeologists not only have focused on very different research questions and employed a variety of methodologies during each fieldwork project, but they are also subject to the preservation of settlement remains, which can have a large impact on what has been possible to explore at a given site. The current study has made a deliberate choice of sites from which adequate qualitative and quantitative information is available in order to respond to the main research questions and to be able to conduct an in-depth analysis of the data. The settlements treated here are by no means a complete catalogue of all known sites dating to the chosen time period, but rather reflect a distinct choice by the author. The choices have been governed by the quality and availability of data for each respective settlement. As noted previously, the archaeological data is unevenly spread across different periods and was retrieved using a variety of methodologies, in addition to which the specific research objectives have had a considerable effect on the way the information has been published. As much as possible, a set of core questions investigating the nature and development of...
settlements will be addressed for each example in this book, but in some instances there might be larger gaps in the data, resulting in a much more varied presentation not always appearing as a coherent analysis when comparing one site with another. Regional distribution of available evidence can be quite problematic too, which means that for some areas in Egypt numerous sites are known (as is the case for Upper Egypt), while for other regions (such as Middle Egypt or the Delta) there is little evidence at all for certain periods even though it is clear that they had been part of the overall settlement system.\textsuperscript{14}

For the early settlement at Hierakonpolis, there is a great wealth of published data, which allows us to trace the evolution of this major regional center from its beginnings in the Predynastic Period to the early Old Kingdom (see Chapter 4). Other settlements of the same period only offer a limited amount of data for early ancient Egyptian towns, which makes Hierakonpolis the dominant example and closer intersite comparisons difficult. Much attention should be paid to the integration of the geographical parameters and the natural environment that characterize each settlement. At Hierakonpolis, data was collected through excavations, surveys, and drill cores, which provide a relatively large spectrum of information covering many aspects of life at this important town. Other sites, such as Elephantine in the far south, have occupational remains spanning most of ancient Egyptian history, but the amount of information for the different settlement phases can vary considerably from one period to another. There is a good overview for the early Old Kingdom period, but the late Old Kingdom is less well represented due to the relatively small areas of exposure accessible beneath much-later settlement remains. Nevertheless, Elephantine is one of the best-explored townsites in Egypt. Similarly, there are other places that can provide much data for one specific period that has been the focus of fieldwork, whereas it is impossible to evaluate the development over time and conduct intrasite comparisons. As a consequence, the current study is dependent upon the availability of data, which is spread unevenly across different time periods and regions. Therefore, it is not always possible to provide an assessment that measures up to the precision one would like to achieve in the evaluation of settlement patterns and the hierarchy of settlements on a broader basis throughout the Nile Valley and Delta and in a complete diachronic order.

The following topics will be evaluated as far as possible for each selected site, starting from the Predynastic Period until the end of the Middle Kingdom/early Second Intermediate Period. Local topography and landscape settings are important parameters that have not only an effect on the physical appearance of settlements but also influence the evolution and growth over time. Major urban centers can frequently be found in regions that have had an advantageous access to important trade routes, quarries, and mining sites in the desert. Furthermore, there are urban areas that developed into centers of national religious importance – such as is the case of Abydos with the cult of the god Osiris, the god of the afterlife, whose cult focused on an important procession route from the Middle Kingdom onward, attracting pilgrims from the entire country. In the following times, major temples and places for worship and even some royal funerary monuments were erected within the vicinity of a flourishing provincial town expanding along the desert edge.\textsuperscript{15}

The role of towns and cities within the wider network of sites in Egypt on a national and local level will also be reconsidered. This can be achieved through the investigation of the evolving presence of local elites managing their towns as well as their link to the royal court and also to the existing hinterland. Closely related to such points of inquiry is the layout of each settlement and the possible identification of official structures and institutions such as the main temple complex and related sanctuaries and chapels, administrative buildings, and storage facilities that go beyond private storage efforts, to name just a few. Further defining elements are the presence or absence of a system of enclosure or perimeter walls around the site. The organization of domestic quarters and house layouts – identifying local traditions, characteristics of social patterns, and changes in local family units – clearly reveal the private aspects of daily life in towns and cities.

It is the aim of this study to provide the first in-depth analysis of the urban elements within ancient Egyptian society, an analysis based primarily on the archaeological evidence. As will be outlined in Chapter 1, there have been several attempts to apply theoretical models to the settlement data from the Pharaonic period and to integrate our knowledge from key sites such as Tell el-Amarna, Deir el-Medineh (Theban West Bank, opposite modern Luxor), and Lahun (Figure 8.1) into the larger framework of comparative studies on ancient urbanism. These efforts have not met with much success in the past, mostly because of insufficient data available...
for questions about settlement size and population numbers. Several studies exist that provide some estimates concerning these issues, but their validity remains questionable. The other main reason it has been difficult to use Egypt as an example of an early urban society in comparative studies is the apparent lack of relevant publications. There are many archaeological site reports that present field data in great detail, but there are often no or few attempts to analyze this data within the overall settlement system and its role within urban society. Although there is much information from a microlevel perspective, there are few intersite comparisons. Thus, scholars working on a comparative level and outside the field of Egyptology or Egyptian archaeology often encounter difficulties using data from Egypt for their analyses. As will be shown in Chapter 1, this has led to an increasingly noticeable trend of ancient Egypt being omitted in studies on urbanism in antiquity, which the current book attempts to remedy. It is the aim of this research project to provide a precise framework for future evaluations and analyses of new archaeological data from Egypt as well as to explain how urban society functioned and how it was affected by cultural and political changes. In addition, this research will provide a new opportunity for comparative and theoretical studies on ancient urbanism and include the example of Egypt in a meaningful way – an approach not based on rough estimates and speculation but rather on recovered data from intensive archaeological fieldwork.

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* All the abbreviations of journals and series follow the conventions established in W. Helck, E. Otto (eds.), *Lexikon der Ägyptologie*. Band 1, 1975, Wiesbaden: Harrassowitz.


Ancient Urbanism and the Case of Egypt

1.1 GENERAL CONSIDERATIONS RELATING TO URBANISM IN EARLY CIVILIZATIONS

Understanding the ancient Egyptian civilization as an example of the early pristine states that emerged seemingly independently in different parts of the world at different times is an important starting point for investigating urbanism and urban society. The project on early complex societies launched recently by the Santa Fe Institute provides an interesting and innovative theoretical framework through which to investigate a variety of characteristics and identify universal patterns that seem to be shared by these early states. This research is ongoing and has been drawing on many fields, bringing together a vast quantity of archaeological data, which is being entered into a single database with details on economy, trade, agriculture, climate and environmental factors, demographics, disease, and any other relevant information that can be linked to early states. This will form the key data from which future models and simulations on different levels will be developed, with the aim of shedding light on the various mechanisms at play that lead to state formation. This approach emphasizes that, while some basic features of the urban system can be found in both, there are a number of noticeable differences between the two groups. Although “urban society” and “the state” are not necessarily dependent entities, George Cowgill was able to demonstrate that “the state” is not a prerequisite for urbanism. Despite such criticism, the two trajectories laid out by Trigger provide a useful angle from which urbanism can be investigated. He points out that the presence of urban centers is a common characteristic of all early civilizations, but it is the nature of urbanism that differs in each case. In his comparative analysis of urbanism in territorial states, Trigger identifies a certain hierarchy within the settlement network, which is based not on size but on function. Urban centers occurred on various levels and were inhabited by a recognizable urban society that contained an elite of administrators and priests, people who could be considered more as part of a “middle class” engaged in craft manufacturing, and also workers who were engaged in production. By distinguishing the specific character of urban centers in “city-states” versus those of “territorial states,” it is finally possible to move away from several attempts to adapt methodologies and definitions that proved successful – for example, in Mesopotamian
archaeology, such as the key analysis of settlement patterns by Robert McC. Adams – but are less applicable to ancient Egypt. Adams was able to include a large amount of survey data from his fieldwork for the study of the Mesopotamian settlement system, which allowed him to trace the interactions between the major city-states and their hinterlands as well as the evolution of land use throughout various periods of Mesopotamian history. However, using his work as a viable model for ancient Egypt is not possible with the current available data, and it is also difficult to make comparisons because there is no region within the Nile Valley or Delta where a representative sample record of settlements for any given period has been obtained that includes the full spectrum of towns, villages, and estates that would have been present in Pharaonic-period Egypt. In addition, there is little environmental data relating to settlement patterns and the organization of canals and fields, and almost nothing is known about the villages based on archaeological sources.

With the increasing amount of available evidence, Egypt as an urban society needs to be reconsidered and the precise nature of Egyptian urbanism defined. Trigger emphasized that many definitions trying to capture the essence of ancient urbanism are looking at the quantitative aspects – for example, size and population density. Such definitions are not conducive to conceptualizing the nature of urban societies of early civilizations and “rarely contribute to a better understanding of urban phenomena.” The inherently functionalist assumption adopted by a large number of scholars, that settlement size is linked to qualitative variations and the complexity of the inhabitants’ social structure, needs to be revised.

In its most basic form, urban society can be described as a “society with cities.” Such a definition has the advantage of avoiding a too-rigid differentiation of urban versus rural society, a dichotomy that should be regarded as insufficient for including many of the nuances that fall between these two categories and one that necessitates more flexibility than is expressed by these two terms. In its most general terms, urban society in ancient Egypt is defined here as the element of the population that is exposed to the presence of urban centers and experiencing the existence of urbanism within the overall settlement system. Barry Kemp observes that the emergence of urban centers evolved rather slowly through the third millennium BCE; even though a significant part of the population lived in towns, in terms of size, the centers remained relatively small. The fortified town wall and “public architecture” are certainly important urban elements, although the latter often remains restricted to the main temple, especially for most of the third millennium BCE.

Cowgill points out in his comprehensive study on the origins and evolution of urbanism that it is crucial to provide clear definitions that are culture-specific in terms of what constitutes a “village,” “town,” “city,” and “urban center” and what is meant by “urban society.” Although these terms are commonly applied on a broad basis to ancient and modern civilizations, the lack of definition can be problematic because of the inherent cultural differences and traditions that shape these concepts and that pertain to any attempts at cross-cultural comparisons. Cowgill provides a broad definition that he intends to be universally applicable, but one that needs to be refined according to culturally specific criteria: a city is “a permanent settlement within a larger territory occupied by a society considered home by a significant number of residents whose activities, roles, practices, experiences, identities, and attitudes differ significantly from those of other members of the society who identify most closely with rural lands outside such settlements.” He further specifies that “cities are typically political, economic, and religious centers for a surrounding territory and loci for wider ranges of specialized production and services than are found elsewhere in the region.” Along similar lines Paul Wheatley presents a definition in his study of the Islamic city that fits well with the evidence from ancient Egypt because it is less defined by quantitative factors and more by function: “A city comprises a set of functionally interrelated social, political, administrative, economic, cultural, religious, and other institutions located in close proximity in order to exploit scale economies.” Apart from the city creating a stage of economic interactions, the impact on society of creating “effective space” through these urban institutions should not be underestimated and might have acted as a catalyst for bringing together wider regions and different segments of society. Wheatley also emphasizes that these institutions “have combined in different ways in different cultures and at different times” and that the emergence of state institutions is intrinsically linked to the emergence of urbanism in early societies. Trigger evaluates the attempts to place paradigms of the preindustrial city on a single continuum and concludes that, while it is possible to identify key variables that tie them together, the variables combine “to shape an indefinite number of trajectories or paths of preindustrial urban development, any one of which may be
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associated with a particular civilization.” He identifies three variables that can be recognized as having played an important role in the emergence of urban centers in preindustrial societies and in the determination of the size and layout of settlements as well as the composition of the population within the urban settlement. One of the variables is the degree of economic complexity, which takes into account factors such as the degree of labor division and craft specialization and the number of people who are not primarily involved in food production. Trigger recognizes that the latter case might include only a relatively small proportion of the inhabitants within most ancient cities, but he emphasizes that it is the larger number of people being connected through routine economic interactions that makes such populations stand out from nonurban settlements. Another factor he identifies as being important in this context concerns the process and strategies employed by the inhabitants of urban settlements to procure food resources and supplies from their hinterland. This aspect is more clearly recognizable in the case of Mesopotamian city-states, where a large part of the urban population also cultivated the land around the cities during the third millennium BCE. For Egypt, this is much harder to grasp because most of the available sources that provide information about obtaining food and agricultural produce in terms of supplies refer to the highest elite contexts and the palatial administration of the king through a centralized administrative network and the procurement of such supplies through a rigid system of taxation. There are almost no sources that address the relationship of the city dwellers to the hinterland of their cities.

A third variable presented by Trigger relates to the political context within which cities occur. Although this factor certainly contributed to shaping the layout and size of cities, the geographical setting and landscapes in which early states formed play an important role as well. Egypt has always been the kind of nation-state where early civilizations and to establish a list of categories that may be assigned to different urban and nonurban forms of settlement – one that retains the ability to show the nuances that can be recognized among the different types of settlements encountered in the archaeological record.

In principle, people who are part of an urban society belong to a wider spectrum of social groups and have experienced or are directly experiencing urban conditions and lifestyles that differ from those of their rural counterparts in complexity through the hierarchy, administration, economy, and engagement in non-food-producing occupations. However, this contrast to “rural society” does not take into account certain subtle differences that seem to be typical for ancient Egypt. From the archaeological evidence, especially small finds in the form of tools or private storage installations, it is possible to deduce that a certain number of inhabitants of an urban settlement were also involved in agricultural activities or at least possessed and exploited agricultural land. It is also possible to encounter, through biographical inscriptions, urban dwellers who probably not only lived within a town but also owned property in the countryside.

This means that it is not a prerogative for members of an urban society to live in urban centers as such, but rather that their urban experience shapes the lives within their respective social environments. This not only can happen on the basis of social hierarchy and organization but also on a socioeconomic basis. One example of members of an urban society being present in a nonurban settlement can be found in those who were linked to the royal mortuary cults in the Memphite region during the Old Kingdom. In this case, a large number of people lived on a permanent or semipermanent basis in complex and specialized settlements that fall into the category of state foundations with nonurban character, as they did not possess some of the principal characteristics that define an urban settlement in Egypt (see Section 1.3.4). The best illustration of this type of situation is the town at Het el-Ghurab at Giza, which brought together different sectors of Old Kingdom society for the purpose of administering and organizing the construction work linked to the various royal pyramid complexes nearby. A certain degree of social complexity is clearly present at this settlement, which can be recognized by variations in house layouts and evidence for administrative tasks, manufacturing activities, and food production being carried out in discrete areas of the settlement. The complexity of social organization as reflected in the spatial distribution of the
settlement is also confirmed by a marked variation in diet and food consumption noticed in the different habitation zones.\textsuperscript{30}

The political role a town played within the larger settlement system of any given ancient society is not necessarily linked to its economic role.\textsuperscript{31} Settlement growth and evolution can be dependent on political, social, ceremonial, and economic factors, not all of which are mutually exclusive. These factors are also not static, but rather are in a constant flux of change and redefinition, especially during transitional periods that were characterized by major political and cultural changes. One such period occurred at the end of the third millennium BCE in Egypt, when the centralized state of the Old Kingdom fell apart and was replaced by a much more regional system that saw the appearance of local styles and variation, especially noticeable in the material culture.

The economic system as well as the political context certainly had a major impact on the evolution and the creation of different types of settlements within Egypt. For example, during the third millennium BCE, the centralized state controlled much of the resources through mechanisms that assured regular income in the form of taxes from agriculture and farming activities, the prerogative to exploit raw materials, and authority over most of the important trade networks. The state was invested in the construction and maintenance of large royal mortuary complexes, which it achieved by integrating the mortuary temples within the wider economic network. This had two principle effects on the settlement system: one, the endless creation of royal domains and estates in the agriculturally exploitable regions, especially the Delta. Probably a fair amount of them were refoundations of existing villages and hamlets whose inhabitants were paying state taxes in the form of animals, produce, and grain from their annual harvest.\textsuperscript{33} This is known from the relief scenes depicting domain processions, which have been found at the mortuary temples and causeways in the Memphite necropolis showing lines of people bringing these goods from the domains to the institutions.\textsuperscript{33} While the creation of domains must have had some significant impact on the local communities in terms of their economic status, it is evident that they continued to function on the local level, according to their established household and kinship patterns, probably without experiencing drastic changes in daily life.\textsuperscript{34}

The state interfered to a certain extent in people’s lives based on economic considerations, but there is no evidence that it changed the essence and character of these rural communities.

Second, it can be noted that there was a population influx toward these royal funerary complexes in the Memphite region, which attracted large numbers of people on a permanent and semipermanent basis. Excavations at Giza have shown that the large town recently discovered at Heit el-Ghurab is the direct result of a new state foundation consisting of three distinct settlement quarters (the Gallery Complex, the Eastern Town, and the Western Town). The inhabitants of the Eastern Town mostly appear to have been self-organized and closely connected to food production and supply tasks, whereas the Western Town was inhabited by an elite involved in administration. The Gallery Complex seems to have provided temporary accommodation to the large workforce being employed in the construction work on a rotation basis. Thus, different social groups came to inhabit discrete neighborhoods of an essentially state-founded town.

1.2 THE CASE OF ANCIENT EGYPT

1.2.1 Problems of quantitative factors

Before delving into further specifics that can be deduced from the archaeological evidence recovered during surveys and excavations of ancient Egyptian settlements, it is useful to briefly present the issues that are encountered when pursuing a definition according to population numbers and settlement size. These two variables have been frequently regarded as necessary for any evaluation of the urban system, but the shortcomings of this approach are clearly recognizable in several studies in which attempts have been made to use quantitative criteria such as settlement size and hierarchy as well as population estimates.\textsuperscript{36} The data needed for any reliable assessments along these lines is difficult to come by from the archaeological record alone, especially as most sites have not been fully excavated. Parts of settlements can be missing in the archaeological record because of destruction (agriculture, sebkah digging, etc.) or are beyond reach for any kind of fieldwork (e.g., covered by modern settlement or thick alluvial deposits), which can make precise estimates about the maximum size difficult.\textsuperscript{37} This is specifically problematic for tell sites that consist of a multitude of superimposed occupation levels; and while the maximum size of a tell can often be determined through satellite images and survey work, the size for
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any specific phase of occupation is harder to define. Thus, the evolution of a settlement through time and the effect of long-term political and socioeconomic changes can be established only in exceptional cases. A rare example of a successful study in this respect is the site of Buto in the Nile Delta. The size of the three adjacent mounds that characterize the site have been known for a long time and are visible on satellite imagery, but the exact dimensions of the town during the different Pharaonic and post-Pharaonic periods have only recently been established—with the help of drill core sampling and the implementation of a new survey method.48

Population density and numbers also have limitations in relation to Egyptian settlements, because household sizes are mainly rough estimates. Kemp uses a census list from the settlement of Lahun in the Fayum region to investigate household size in Middle Kingdom Egypt, allowing him to trace the evolution of a single household over several generations.49 From the initial couple founding a household, it grows to nine persons, including the core family consisting of the couple and their children and additional female relatives. By the time the census list had been drawn up in the name of the son who inherited the position as head of the household, it had shrunk to six persons. Another document from the same site lists a core family of three persons and seventeen servants, who also were considered part of a single household. Dominique Valbelle assigns both families to the “middle class” of officials living at Lahun during the late Middle Kingdom.50 Similar census lists are known for the late New Kingdom occupants at the workmen’s village of Deir el-Medineh.51 These lists show that the official recording of households for administrative purposes on a regional, and probably national, level existed at least from the Middle Kingdom onward, but few documents have survived. What is missing from these sources is any link to specific domestic buildings, and it is not possible to determine whether all household members occupied a single dwelling or several neighboring houses of smaller size that were located in the vicinity of the large ones.52

What the papyri do tell us is that a household contained not only members and relatives of a family but also staff and servants, thus expanding beyond the core family.

In this respect, the ethnographic study by Raoul Naroll can be useful for estimating the number of occupants in a house more precisely.53 He investigates floor plans of domestic buildings and population numbers in eighteen societies from different parts of the world, and despite the obviously strong cultural differences and variety in the social organization of each, it is possible to deduce that about 10 m² per person of dwelling floor space was assigned on average. This formula received varied criticisms and refinements in terms of how precisely it is possible to identify dwelling floor space in ancient cultures and what factors can lead to errors in the prediction of the number of inhabitants within a given dwelling.44 Despite the caution necessary for such generalized calculations, Barton Mc. Brown demonstrates in a revision of Naroll’s study that it is possible to predict about 6 m² per person in relation to the floor area within a house, on a worldwide level and rough scale. Thus, an estimate between 6 and 10 m² per person can provide a more precise approximate figure for buildings that are difficult to assess than depending on architecture and material culture alone, such as has been the case for the barrack-style living units at the western settlement of Qasr el-Sagha, which is situated in the Fayum region.54

Identification of domestic living space within a given building can also be problematic. It is especially complicated when there is evidence for upper floors and the use of roof space, which is not always clearly identifiable and quantifiable in the archaeological record. Therefore some uncertainty is inherent in any calculation of floor space and the number of inhabitants, such as those proposed by Naroll and Brown. This can also be illustrated by traces of stairs found in domestic buildings in Egypt, which could lead to the roof or to an upper floor55; the distinction between the two is not always clear. In addition, the use of such upper floor space cannot be assigned with much certainty to specific functions and uses. Kate Spence suggests that an upper floor could have been used as a private family room by the entire family or specifically by women.56 If the space on the roof was not properly built as a covered space, it could have been occasionally used for sleeping during the hot summer months or for storage and food preparation. Accessible roof space or a second floor was unlikely to have covered the same area as the underlying first floor, especially when the dwelling had a central courtyard. The possible existence of wind-hoods above bedrooms constitutes another situation in which the roof would not have been fully accessible.57

An additional aspect dealing with the evaluation of domestic living space is the constant rebuilding and changes within houses, which were often divided into smaller units over their lifetime, mainly due to inheritance matters. The evolution of a domestic town quarter at Elephantine from the early Middle Kingdom into the Second Intermediate Period has contributed significantly